



P011073us seq list updated.ST25.txt

SEQUENCE LISTING

<110> Lorantis Ltd.

<120> Modulations of Notch signalling for use in Immunotherapy

<130> P011073US

<140> 10/764,415

<141> 2004-07-23

<150> GB0118153.6

<151> 2001-07-01

<150> GB0207930.9

<151> 2002-04-05

<150> GB0212283.6

<151> 2002-05-28

<150> GB0212282.8

<151> 2002-05-28

<160> 40

<170> PatentIn version 3.0

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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
35 40

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1				5						10					15	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25						30		
Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys					
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<222> (7)..(9)

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Cys	Xaa	Xaa	Xaa	Tyr	Tyr	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Cys	Arg	Pro
1				5					10					15	
Arg	Xaa	Asp	Xaa	Phe	Gly	His	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Gly	Xaa	Xaa
		20					25						30		
Xaa	Cys	Xaa	Xaa	Gly	Trp	Xaa	Gly	Xaa	Xaa	Cys					
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Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	35	40	45	
Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	50	55	60	
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	65	70	75	80
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	85	90	95	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	100	105	110	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	115	120	125	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	130	135	140	
Cys	Xaa	Xaa	Gly	Ala	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	145	150	155	160
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Gly	Xaa	Xaa	Cys	Xaa	Xaa	165	170	175	

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Gly	Phe	Lys	Val	Ser	Glu	Ala	Ser	Lys	Lys	Lys	Arg	Arg	Glu	Pro	Leu
		20					25						30		

Gly	Glu	Asp	Ser	Val	Gly	Leu	Lys	Pro	Leu	Lys	Asn	Ala	Ser	Asp	Gly
		35				40						45			

Ala	Leu	Met	Asp	Asp	Asn	Gln	Asn	Glu	Trp	Gly	Asp	Glu	Asp	Leu	Glu
	50					55					60				

Thr	Lys	Lys	Phe	Arg	Phe	Glu	Glu	Pro	Val	Val	Leu	Pro	Asp	Leu	Asp
65					70					75					80

Asp	Gln	Thr	Asp	His	Arg	Gln	Trp	Thr	Gln	Gln	His	Leu	Asp	Ala	Ala
				85					90					95	

Asp	Leu	Arg	Met	Ser	Ala	Met	Ala	Pro	Thr	Pro	Pro	Gln	Gly	Glu	Val
			100					105					110		

Asp	Ala	Asp	Cys	Met	Asp	Val	Asn	Val	Arg	Gly	Pro	Asp	Gly	Phe	Thr
		115					120					125			

Pro	Leu	Met	Ile	Ala	Ser	Cys	Ser	Gly	Gly	Gly	Leu	Glu	Thr	Gly	Asn
	130					135					140				

Ser	Glu	Glu	Glu	Glu	Asp	Ala	Pro	Ala	Val	Ile	Ser	Asp	Phe	Ile	Tyr
145					150					155					160

Gln	Gly	Ala	Ser	Leu	His	Asn	Gln	Thr	Asp	Arg	Thr	Gly	Glu	Thr	Ala
				165					170					175	

Leu	His	Leu	Ala	Ala	Arg	Tyr	Ser	Arg	Ser	Asp	Ala	Ala	Lys	Arg	Leu
			180					185					190		

Leu	Glu	Ala	Ser	Ala	Asp	Ala	Asn	Ile	Gln	Asp	Asn	Met	Gly	Arg	Thr
		195					200					205			

Pro	Leu	His	Ala	Ala	Val	Ser	Ala	Asp	Ala	Gln	Gly	Val	Phe	Gln	Ile
	210					215					220				

Leu	Ile	Arg	Asn	Arg	Ala	Thr	Asp	Leu	Asp	Ala	Arg	Met	His	Asp	Gly
225					230					235					240

Thr	Thr	Pro	Leu	Ile	Leu	Ala	Ala	Arg	Leu	Ala	Val	Glu	Gly	Met	Leu
				245					250					255	

Glu	Asp	Leu	Ile	Asn	Ser	His	Ala	Asp	Val	Asn	Ala	Val	Asp	Asp	Leu
			260					265					270		

P11073us seq list updated.ST25.txt

Gly	Lys	Ser	Ala	Leu	His	Trp	Ala	Ala	Ala	Val	Asn	Asn	Val	Asp	Ala
		275					280					285			
Ala	Val	Val	Leu	Leu	Lys	Asn	Gly	Ala	Asn	Lys	Asp	Met	Gln	Asn	Asn
	290					295					300				
Arg	Glu	Glu	Thr	Pro	Leu	Phe	Leu	Ala	Ala	Arg	Glu	Gly	Ser	Tyr	Glu
305					310					315					320
Thr	Ala	Lys	Val	Leu	Leu	Asp	His	Phe	Ala	Asn	Arg	Asp	Ile	Thr	Asp
			325					330						335	
His	Met	Asp	Arg	Leu	Pro	Arg	Asp	Ile	Ala	Gln	Glu	Arg	Met	His	His
		340						345					350		
Asp	Ile	Val	Arg	Leu	Leu	Asp	Glu	Tyr	Asn	Leu	Val	Arg	Ser	Pro	Gln
	355						360					365			
Leu	His	Gly	Ala	Pro	Leu	Gly	Gly	Thr	Pro	Thr	Leu	Ser	Pro	Pro	Leu
	370					375					380				
Cys	Ser	Pro	Asn	Gly	Tyr	Leu	Gly	Ser	Leu	Lys	Pro	Gly	Val	Gln	Gly
385					390					395					400
Lys	Lys	Val	Arg	Lys	Pro	Ser	Ser	Lys	Gly	Leu	Ala	Cys	Gly	Ser	Lys
				405					410					415	
Glu	Ala	Lys	Asp	Leu	Lys	Ala	Arg	Arg	Lys	Lys	Ser	Gln	Asp	Gly	Lys
			420					425					430		
Gly	Cys	Leu	Leu	Asp	Ser	Ser	Gly	Met	Leu	Ser	Pro	Val	Asp	Ser	Leu
		435					440					445			
Glu	Ser	Pro	His	Gly	Tyr	Leu	Ser	Asp	Val	Ala	Ser	Pro	Pro	Leu	Leu
	450					455					460				
Pro	Ser	Pro	Phe	Gln	Gln	Ser	Pro	Ser	Val	Pro	Leu	Asn	His	Leu	Pro
465					470					475					480
Gly	Met	Pro	Asp	Thr	His	Leu	Gly	Ile	Gly	His	Leu	Asn	Val	Ala	Ala
				485					490					495	
Lys	Pro	Glu	Met	Ala	Ala	Leu	Gly	Gly	Gly	Gly	Arg	Leu	Ala	Phe	Glu
			500					505					510		
Thr	Gly	Pro	Pro	Arg	Leu	Ser	His	Leu	Pro	Val	Ala	Ser	Gly	Thr	Ser
		515					520					525			
Thr	Val	Leu	Gly	Ser	Ser	Ser	Gly	Gly	Ala	Leu	Asn	Phe	Thr	Val	Gly
	530					535					540				
Gly	Ser	Thr	Ser	Leu	Asn	Gly	Gln	Cys	Glu	Trp	Leu	Ser	Arg	Leu	Gln
545					550					555					560
Ser	Gly	Met	Val	Pro	Asn	Gln	Tyr	Asn	Pro	Leu	Arg	Gly	Ser	Val	Ala
				565					570					575	
Pro	Gly	Pro	Leu	Ser	Thr	Gln	Ala	Pro	Ser	Leu	Gln	His	Gly	Met	Val
			580					585					590		
Gly	Pro	Leu	His	Ser	Ser	Leu	Ala	Ala	Ser	Ala	Leu	Ser	Gln	Met	Met
		595					600					605			
Ser	Tyr	Gln	Gly	Leu	Pro	Ser	Thr	Arg	Leu	Ala	Thr	Gln	Pro	His	Leu
	610					615					620				
Val	Gln	Thr	Gln	Gln	Val	Gln	Pro	Gln	Asn	Leu	Gln	Met	Gln	Gln	Gln
625					630					635					640

P11073us seq list updated.ST25.txt

Asn Leu Gln Pro Ala Asn Ile Gln Gln Gln Gln Ser Leu Gln Pro Pro
645 650 655

Pro Pro Pro Pro Gln Pro His Leu Gly Val Ser Ser Ala Ala Ser Gly
660 665 670

His Leu Gly Arg Ser Phe Leu Ser Gly Glu Pro Ser Gln Ala Asp Val
675 680 685

Gln Pro Leu Gly Pro Ser Ser Leu Ala Val His Thr Ile Leu Pro Gln
690 695 700

Glu Ser Pro Ala Leu Pro Thr Ser Leu Pro Ser Ser Leu Val Pro Pro
705 710 715 720

Val Thr Ala Ala Gln Phe Leu Thr Pro Pro Ser Gln His Ser Tyr Ser
725 730 735

Ser Pro Val Asp Asn Thr Pro Ser His Gln Leu Gln Val Pro Glu His
740 745 750

Pro Phe Leu Thr Pro Ser Pro Glu Ser Pro Asp Gln Trp Ser Ser Ser
755 760 765

Ser Pro His Ser Asn Val Ser Asp Trp Ser Glu Gly Val Ser Ser Pro
770 775 780

Pro Thr Ser Met Gln Ser Gln Ile Ala Arg Ile Pro Glu Ala Phe Lys
785 790 795 800

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<212> PRT

<213> Drosophila sp.

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Trp Lys Thr Asn Lys Ser Glu Ser Gln Tyr Thr Ser Leu Glu Tyr Asp
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Phe Arg Val Thr Cys Asp Leu Asn Tyr Tyr Gly Ser Gly Cys Ala Lys
20 25 30

Phe Cys Arg Pro Arg Asp Asp Ser Phe Gly His Ser Thr Cys Ser Glu
35 40 45

Thr Gly Glu Ile Ile Cys Leu Thr Gly Trp Gln Gly Asp Tyr Cys
50 55 60

<210> 19

<211> 63

<212> PRT

<213> Homo sapiens

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Trp Ser Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Lys Tyr Ser
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Tyr Arg Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val

20

25

30

Phe Cys Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Glu
 35 40 45

Arg Gly Glu Lys Val Cys Asn Pro Gly Trp Lys Gly Pro Tyr Cys
 50 55 60

<210> 20

<211> 63

<212> PRT

<213> Mus musculus

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Trp Ser Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Arg Tyr Ser
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Tyr Arg Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val
 20 25 30

Phe Cys Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Asp
 35 40 45

Arg Gly Glu Lys Met Cys Asp Pro Gly Trp Lys Gly Gln Tyr Cys
 50 55 60

<210> 21

<211> 63

<212> PRT

<213> Rattus rattus

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Trp Ser Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Arg Tyr Ser
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Tyr Arg Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val
 20 25 30

Phe Cys Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Glu
 35 40 45

Arg Gly Glu Lys Met Cys Asp Pro Gly Trp Lys Gly Gln Tyr Cys
 50 55 60

<210> 22

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<213> Mus musculus

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Trp Arg Thr Asp Glu Gln Asn Asp Thr Leu Thr Arg Leu Ser Tyr Ser
 1 5 10 15

P11073us seq list updated.ST25.txt

Tyr Arg Val Ile Cys Ser Asp Asn Tyr Tyr Gly Glu Ser Cys Ser Arg
20 25 30

Leu Cys Lys Lys Arg Asp Asp His Phe Gly His Tyr Glu Cys Gln Pro
35 40 45

Asp Gly Ser Leu Ser Cys Leu Pro Gly Trp Thr Gly Lys Tyr Cys
50 55 60

<210> 23

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<213> Homo sapiens

<400> 23

Trp Leu Leu Asp Glu Gln Thr Ser Thr Leu Thr Arg Leu Arg Tyr Ser
1 5 10 15

Tyr Arg Val Ile Cys Ser Asp Asn Tyr Tyr Gly Asp Asn Cys Ser Arg
20 25 30

Leu Cys Lys Lys Arg Asn Asp His Phe Gly His Tyr Val Cys Gln Pro
35 40 45

Asp Gly Asn Leu Ser Cys Leu Pro Gly Trp Thr Gly Glu Tyr Cys
50 55 60

<210> 24

<211> 63

<212> PRT

<213> Rattus rattus

<400> 24

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Ile Arg Val Thr Cys Asp Asp His Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30

Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly His Tyr Ala Cys Asp Gln
35 40 45

Asn Gly Asn Lys Thr Cys Met Glu Gly Trp Met Gly Pro Glu Cys
50 55 60

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P11073us seq list updated.ST25.txt

Trp Gln Thr Leu Lys Gln Asn Thr Gly Ile Ala His Phe Glu Tyr Gln
1 5 10 15

Ile Arg Val Thr Cys Asp Asp His Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30

Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly His Tyr Ala Cys Asp Gln
35 40 45

Asn Gly Asn Lys Thr Cys Met Glu Gly Trp Met Gly Pro Asp Cys
50 55 60

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<212> PRT

<213> Homo sapiens

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Trp Gln Thr Leu Lys Gln Asn Thr Gly Val Ala His Phe Glu Tyr Gln
1 5 10 15

Ile Arg Val Thr Cys Asp Asp Tyr Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30

Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly His Tyr Ala Cys Asp Gln
35 40 45

Asn Gly Asn Lys Thr Cys Met Glu Gly Trp Met Gly Arg Glu Cys
50 55 60

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<212> PRT

<213> Gallus sp.

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Trp Gln Thr Leu Lys His Asn Thr Gly Ala Ala His Phe Glu Tyr Gln
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Ile Arg Val Thr Cys Ala Glu His Tyr Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30

Phe Cys Arg Pro Arg Asp Asp Phe Phe Thr His His Thr Cys Asp Gln
35 40 45

Asn Gly Asn Lys Thr Cys Leu Glu Gly Trp Thr Gly Pro Glu Cys
50 55 60

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<212> PRT

<213> Gallus sp.

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Trp Lys Thr Leu Gln Phe Asn Gly Pro Val Ala Asn Phe Glu Val Gln
1          5          10          15
Ile Arg Val Lys Cys Asp Glu Asn Tyr Tyr Ser Ala Leu Cys Asn Lys
          20          25          30
Phe Cys Gly Pro Arg Asp Asp Phe Val Gly His Tyr Thr Cys Asp Gln
          35          40          45
Asn Gly Asn Lys Ala Cys Met Glu Gly Trp Met Gly Glu Glu Cys
          50          55          60

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<212> PRT

<213> Mus musculus

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Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln
1          5          10          15
Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn Lys
          20          25          30
Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp Gln
          35          40          45
Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
          50          55          60

```

<210> 30

<211> 63

<212> PRT

<213> Homo sapiens

<400> 30

```

Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln
1          5          10          15
Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn Lys
          20          25          30
Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp Gln
          35          40          45
Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
          50          55          60

```

<210> 31

<211> 63

<212> PRT

<213> Rattus rattus

<400> 31

```

Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln
1      5      10      15
Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn Lys
      20      25      30
Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp Gln
      35      40      45
Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
      50      55      60

```

<210> 32

<211> 63

<212> PRT

<213> Homo sapiens

<400> 32

```

Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln
1      5      10      15
Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn Lys
      20      25      30
Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp Gln
      35      40      45
Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
      50      55      60

```

<210> 33

<211> 63

<212> PRT

<213> Drosophila melanogaster

<400> 33

```

Trp Lys Thr Leu Asp His Ile Gly Arg Asn Ala Arg Ile Thr Tyr Arg
1      5      10      15
Val Arg Val Gln Cys Ala Val Thr Tyr Tyr Asn Thr Thr Cys Thr Thr
      20      25      30
Phe Cys Arg Pro Arg Asp Asp Gln Phe Gly His Tyr Ala Cys Gly Ser
      35      40      45
Glu Gly Gln Lys Leu Cys Leu Asn Gly Trp Gln Gly Val Asn Cys
      50      55      60

```

<210> 34

<211> 723

<212> PRT

<213> Homo sapiens

<400> 34

```

Met Gly Ser Arg Cys Ala Leu Ala Leu Ala Val Leu Ser Ala Leu Leu
 1      5      10      15
Cys Gln Val Trp Ser Ser Gly Val Phe Glu Leu Lys Leu Gln Glu Phe
 20      25      30
Val Asn Lys Lys Gly Leu Leu Gly Asn Arg Asn Cys Cys Arg Gly Gly
 35      40      45
Ala Gly Pro Pro Pro Cys Ala Cys Arg Thr Phe Phe Arg Val Cys Leu
 50      55      60
Lys His Tyr Gln Ala Ser Val Ser Pro Glu Pro Cys Thr Tyr Gly
 65      70      75      80
Ser Ala Val Thr Pro Val Leu Gly Val Asp Ser Phe Ser Leu Pro Asp
 85      90      95
Gly Gly Gly Ala Asp Ser Ala Phe Ser Asn Pro Ile Arg Phe Pro Phe
100      105      110
Gly Phe Thr Trp Pro Gly Thr Phe Ser Leu Ile Ile Glu Ala Leu His
115      120      125
Thr Asp Ser Pro Asp Asp Leu Ala Thr Glu Asn Pro Glu Arg Leu Ile
130      135      140
Ser Arg Leu Ala Thr Gln Arg His Leu Thr Val Gly Glu Glu Trp Ser
145      150      155      160
Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Lys Tyr Ser Tyr Arg
165      170      175
Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val Phe Cys
180      185      190
Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Glu Arg Gly
195      200      205
Glu Lys Val Cys Asn Pro Gly Trp Lys Gly Pro Tyr Cys Thr Glu Pro
210      215      220
Ile Cys Leu Pro Gly Cys Asp Glu Gln His Gly Phe Cys Asp Lys Pro
225      230      235      240
Gly Glu Cys Lys Cys Arg Val Gly Trp Gln Gly Arg Tyr Cys Asp Glu
245      250      255
Cys Ile Arg Tyr Pro Gly Cys Leu His Gly Thr Cys Gln Gln Pro Trp
260      265      270
Gln Cys Asn Cys Gln Glu Gly Trp Gly Gly Leu Phe Cys Asn Gln Asp
275      280      285
Leu Asn Tyr Cys Thr His His Lys Pro Cys Lys Asn Gly Ala Thr Cys
290      295      300
Thr Asn Thr Gly Gln Gly Ser Tyr Thr Cys Ser Cys Arg Pro Gly Tyr
305      310      315      320
Thr Gly Ala Thr Cys Glu Leu Gly Ile Asp Glu Cys Asp Pro Ser Pro
325      330      335
Cys Lys Asn Gly Gly Ser Cys Thr Asp Leu Glu Asn Ser Tyr Ser Cys

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P11073us seq list updated.ST25.txt

340	345	350																	
Thr Cys Pro Pro Gly Phe Tyr Gly Lys Ile Cys Glu Leu Ser Ala Met																			
355						360					365								
Thr Cys Ala Asp Gly Pro Cys Phe Asn Gly Gly Arg Cys Ser Asp Ser						375					380								
370																			
Pro Asp Gly Gly Tyr Ser Cys Arg Cys Pro Val Gly Tyr Ser Gly Phe						390					395								400
385																			
Asn Cys Glu Lys Lys Ile Asp Tyr Cys Ser Ser Ser Pro Cys Ser Asn						405				410									415
Gly Ala Lys Cys Val Asp Leu Gly Asp Ala Tyr Leu Cys Arg Cys Gln						420				425						430			
Ala Gly Phe Ser Gly Arg His Cys Asp Asp Asn Val Asp Asp Cys Ala						435				440					445				
Ser Ser Pro Cys Ala Asn Gly Gly Thr Cys Arg Asp Gly Val Asn Asp						450				455					460				
Phe Ser Cys Thr Cys Pro Pro Gly Tyr Thr Gly Arg Asn Cys Ser Ala						465				470					475				480
Pro Val Ser Arg Cys Glu His Ala Pro Cys His Asn Gly Ala Thr Cys						485				490									495
His Glu Arg Gly His Gly Tyr Val Cys Glu Cys Ala Arg Gly Tyr Gly						500				505						510			
Gly Pro Asn Cys Gln Phe Leu Leu Pro Glu Leu Pro Pro Gly Pro Ala						515				520					525				
Val Val Asp Leu Thr Glu Lys Leu Glu Gly Gln Gly Gly Pro Phe Pro						530				535					540				
Trp Val Ala Val Cys Ala Gly Val Ile Leu Val Leu Met Leu Leu Leu						545				550					555				560
Gly Cys Ala Ala Val Val Val Cys Val Arg Leu Arg Leu Gln Lys His						565				570									575
Arg Pro Pro Ala Asp Pro Cys Arg Gly Glu Thr Glu Thr Met Asn Asn						580				585						590			
Leu Ala Asn Cys Gln Arg Glu Lys Asp Ile Ser Val Ser Ile Ile Gly						595				600						605			
Ala Thr Gln Ile Lys Asn Thr Asn Lys Lys Ala Asp Phe His Gly Asp						610				615					620				
His Ser Ala Asp Lys Asn Gly Phe Lys Ala Arg Tyr Pro Ala Val Asp						625				630					635				640
Tyr Asn Leu Val Gln Asp Leu Lys Gly Asp Asp Thr Ala Val Arg Asp						645				650									655
Ala His Ser Lys Arg Asp Thr Lys Cys Gln Pro Gln Gly Ser Ser Gly						660				665									670
Glu Glu Lys Gly Thr Pro Thr Thr Leu Arg Gly Gly Glu Ala Ser Glu						675				680					685				
Arg Lys Arg Pro Asp Ser Gly Cys Ser Thr Ser Lys Asp Thr Lys Tyr						690				695					700				
Gln Ser Val Tyr Val Ile Ser Glu Glu Lys Asp Glu Cys Val Ile Ala						705				710					715				720

Thr Glu Val

<210> 35

<211> 618

<212> PRT

<213> Homo sapiens

<400> 35

```

Met Val Ser Pro Arg Met Ser Gly Leu Leu Ser Gln Thr Val Ile Leu
1          5          10          15
Ala Leu Ile Phe Leu Pro Gln Thr Arg Pro Ala Gly Val Phe Glu Leu
20        25        30
Gln Ile His Ser Phe Gly Pro Gly Pro Gly Pro Gly Ala Pro Arg Ser
35        40        45
Pro Cys Ser Ala Arg Leu Pro Cys Arg Leu Phe Phe Arg Val Cys Leu
50        55        60
Lys Pro Gly Leu Ser Glu Glu Ala Ala Glu Ser Pro Cys Ala Leu Gly
65        70        75        80
Ala Ala Leu Ser Ala Arg Gly Pro Val Tyr Thr Glu Gln Pro Gly Ala
85        90        95
Pro Ala Pro Asp Leu Pro Leu Pro Asp Gly Leu Leu Gln Val Pro Phe
100       105       110
Arg Asp Ala Trp Pro Gly Thr Phe Ser Phe Ile Ile Glu Thr Trp Arg
115       120       125
Glu Glu Leu Gly Asp Gln Ile Gly Gly Pro Ala Trp Ser Leu Leu Ala
130       135       140
Arg Val Ala Gly Arg Arg Arg Leu Ala Ala Gly Gly Pro Trp Ala Arg
145       150       155       160
Asp Ile Gln Arg Ala Gly Ala Trp Glu Leu Arg Phe Ser Tyr Arg Ala
165       170       175
Arg Cys Glu Pro Pro Ala Val Gly Thr Ala Cys Thr Arg Leu Cys Arg
180       185       190
Pro Arg Ser Ala Pro Ser Arg Cys Gly Pro Gly Leu Arg Pro Cys Ala
195       200       205
Pro Leu Glu Asp Glu Cys Glu Ala Pro Leu Val Cys Arg Ala Gly Cys
210       215       220
Ser Pro Glu His Gly Phe Cys Glu Gln Pro Gly Glu Cys Arg Cys Leu
225       230       235       240
Glu Gly Trp Thr Gly Pro Leu Cys Thr Val Pro Val Ser Thr Ser Ser
245       250       255
Cys Leu Ser Pro Arg Gly Pro Ser Ser Ala Thr Thr Gly Cys Leu Val
260       265       270
Pro Gly Pro Gly Pro Cys Asp Gly Asn Pro Cys Ala Asn Gly Gly Ser
275       280       285

```


Cys Ser Glu Thr Pro Arg Ser Phe Glu Cys Thr Cys Pro Arg Gly Phe
 290 295 300
 Tyr Gly Leu Arg Cys Glu Val Ser Gly Val Thr Cys Ala Asp Gly Pro
 305 310 315 320
 Cys Phe Asn Gly Gly Leu Cys Val Gly Gly Ala Asp Pro Asp Ser Ala
 325 330 335
 Tyr Ile Cys His Cys Pro Pro Gly Phe Gln Gly Ser Asn Cys Glu Lys
 340 345 350
 Arg Val Asp Arg Cys Ser Leu Gln Pro Cys Arg Asn Gly Gly Leu Cys
 355 360 365
 Leu Asp Leu Gly His Ala Leu Arg Cys Arg Cys Arg Ala Gly Phe Ala
 370 375 380
 Gly Pro Arg Cys Glu His Asp Leu Asp Asp Cys Ala Gly Arg Ala Cys
 385 390 395 400
 Ala Asn Gly Gly Thr Cys Val Glu Gly Gly Gly Ala His Arg Cys Ser
 405 410 415
 Cys Ala Leu Gly Phe Gly Gly Arg Asp Cys Arg Glu Arg Ala Asp Pro
 420 425 430
 Cys Ala Ala Arg Pro Cys Ala His Gly Gly Arg Cys Tyr Ala His Phe
 435 440 445
 Ser Gly Leu Val Cys Ala Cys Ala Pro Gly Tyr Met Gly Ala Arg Cys
 450 455 460
 Glu Phe Pro Val His Pro Asp Gly Ala Ser Ala Leu Pro Ala Ala Pro
 465 470 475 480
 Pro Gly Leu Arg Pro Gly Asp Pro Gln Arg Tyr Leu Leu Pro Pro Ala
 485 490 495
 Leu Gly Leu Leu Val Ala Ala Gly Val Ala Gly Ala Ala Leu Leu Leu
 500 505 510
 Val His Val Arg Arg Arg Gly His Ser Gln Asp Ala Gly Ser Arg Leu
 515 520 525
 Leu Ala Gly Thr Pro Glu Pro Ser Val His Ala Leu Pro Asp Ala Leu
 530 535 540
 Asn Asn Leu Arg Thr Gln Glu Gly Ser Gly Asp Gly Pro Ser Ser Ser
 545 550 555 560
 Val Asp Trp Asn Arg Pro Glu Asp Val Asp Pro Gln Gly Ile Tyr Val
 565 570 575
 Ile Ser Ala Pro Ser Ile Tyr Ala Arg Glu Val Ala Thr Pro Leu Phe
 580 585 590
 Pro Pro Leu His Thr Gly Arg Ala Gly Gln Arg Gln His Leu Leu Phe
 595 600 605
 Pro Tyr Pro Ser Ser Ile Leu Ser Val Lys
 610 615
 <210> 36
 <211> 685
 <212> PRT
 <213> Homo sapiens

<400> 36

```

Met Ala Ala Ala Ser Arg Ser Ala Ser Gly Trp Ala Leu Leu Leu Leu
1      5      10      15
Val Ala Leu Trp Gln Gln Arg Ala Ala Gly Ser Gly Val Phe Gln Leu
20      25      30
Gln Leu Gln Glu Phe Ile Asn Glu Arg Gly Val Leu Ala Ser Gly Arg
35      40      45
Pro Cys Glu Pro Gly Cys Arg Thr Phe Phe Arg Val Cys Leu Lys His
50      55      60
Phe Gln Ala Val Val Ser Pro Gly Pro Cys Thr Phe Gly Thr Val Ser
65      70      75      80
Thr Pro Val Leu Gly Thr Asn Ser Phe Ala Val Arg Asp Asp Ser Ser
85      90      95
Gly Gly Gly Arg Asn Pro Leu Gln Leu Pro Phe Asn Phe Thr Trp Pro
100     105     110
Gly Thr Phe Ser Leu Ile Ile Glu Ala Trp His Ala Pro Gly Asp Asp
115     120     125
Leu Arg Pro Glu Ala Leu Pro Pro Asp Ala Leu Ile Ser Lys Ile Ala
130     135     140
Ile Gln Gly Ser Leu Ala Val Gly Gln Asn Trp Leu Leu Asp Glu Gln
145     150     155     160
Thr Ser Thr Leu Thr Arg Leu Arg Tyr Ser Tyr Arg Val Ile Cys Ser
165     170     175
Asp Asn Tyr Tyr Gly Asp Asn Cys Ser Arg Leu Cys Lys Lys Arg Asn
180     185     190
Asp His Phe Gly His Tyr Val Cys Gln Pro Asp Gly Asn Leu Ser Cys
195     200     205
Leu Pro Gly Trp Thr Gly Glu Tyr Cys Gln Gln Pro Ile Cys Leu Ser
210     215     220
Gly Cys His Glu Gln Asn Gly Tyr Cys Ser Lys Pro Ala Glu Cys Leu
225     230     235     240
Cys Arg Pro Gly Trp Gln Gly Arg Leu Cys Asn Glu Cys Ile Pro His
245     250     255
Asn Gly Cys Arg His Gly Thr Cys Ser Thr Pro Trp Gln Cys Thr Cys
260     265     270
Asp Glu Gly Trp Gly Gly Leu Phe Cys Asp Gln Asp Leu Asn Tyr Cys
275     280     285
Thr His His Ser Pro Cys Lys Asn Gly Ala Thr Cys Ser Asn Ser Gly
290     295     300
Gln Arg Ser Tyr Thr Cys Thr Cys Arg Pro Gly Tyr Thr Gly Val Asp
305     310     315     320
Cys Glu Leu Glu Leu Ser Glu Cys Asp Ser Asn Pro Cys Arg Asn Gly
325     330     335
Gly Ser Cys Lys Asp Gln Glu Asp Gly Tyr His Cys Leu Cys Pro Pro
340     345     350

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P11073us seq list updated.ST25.txt

Gly	Tyr	Tyr	Gly	Leu	His	Cys	Glu	His	Ser	Thr	Leu	Ser	Cys	Ala	Asp		
	355						360					365					
Ser	Pro	Cys	Phe	Asn	Gly	Gly	Ser	Cys	Arg	Glu	Arg	Asn	Gln	Gly	Ala		
	370					375					380						
Asn	Tyr	Ala	Cys	Glu	Cys	Pro	Pro	Asn	Phe	Thr	Gly	Ser	Asn	Cys	Glu		
385					390					395					400		
Lys	Lys	Val	Asp	Arg	Cys	Thr	Ser	Asn	Pro	Cys	Ala	Asn	Gly	Gly	Gln		
			405					410						415			
Cys	Leu	Asn	Arg	Gly	Pro	Ser	Arg	Met	Cys	Arg	Cys	Arg	Pro	Gly	Phe		
		420						425					430				
Thr	Gly	Thr	Tyr	Cys	Glu	Leu	His	Val	Ser	Asp	Cys	Ala	Arg	Asn	Pro		
	435						440					445					
Cys	Ala	His	Gly	Gly	Thr	Cys	His	Asp	Leu	Glu	Asn	Gly	Leu	Met	Cys		
	450					455					460						
Thr	Cys	Pro	Ala	Gly	Phe	Ser	Gly	Arg	Arg	Cys	Glu	Val	Arg	Thr	Ser		
465					470					475					480		
Ile	Asp	Ala	Cys	Ala	Ser	Ser	Pro	Cys	Phe	Asn	Arg	Ala	Thr	Cys	Tyr		
			485						490					495			
Thr	Asp	Leu	Ser	Thr	Asp	Thr	Phe	Val	Cys	Asn	Cys	Pro	Tyr	Gly	Phe		
		500					505						510				
Val	Gly	Ser	Arg	Cys	Glu	Phe	Pro	Val	Gly	Leu	Pro	Pro	Ser	Phe	Pro		
	515						520					525					
Trp	Val	Ala	Val	Ser	Leu	Gly	Val	Gly	Leu	Ala	Val	Leu	Leu	Val	Leu		
	530					535					540						
Leu	Gly	Met	Val	Ala	Val	Ala	Val	Arg	Gln	Leu	Arg	Leu	Arg	Arg	Pro		
545					550					555					560		
Asp	Asp	Gly	Ser	Arg	Glu	Ala	Met	Asn	Asn	Leu	Ser	Asp	Phe	Gln	Lys		
				565					570					575			
Asp	Asn	Leu	Ile	Pro	Ala	Ala	Gln	Leu	Lys	Asn	Thr	Asn	Gln	Lys	Lys		
		580						585					590				
Glu	Leu	Glu	Val	Asp	Cys	Gly	Leu	Asp	Lys	Ser	Asn	Cys	Gly	Lys	Gln		
	595						600					605					
Gln	Asn	His	Thr	Leu	Asp	Tyr	Asn	Leu	Ala	Pro	Gly	Pro	Leu	Gly	Arg		
	610					615					620						
Gly	Thr	Met	Pro	Gly	Lys	Phe	Pro	His	Ser	Asp	Lys	Ser	Leu	Gly	Glu		
625					630					635					640		
Lys	Ala	Pro	Leu	Arg	Leu	His	Ser	Glu	Lys	Pro	Glu	Cys	Arg	Ile	Ser		
			645						650					655			
Ala	Ile	Cys	Ser	Pro	Arg	Asp	Ser	Met	Tyr	Gln	Ser	Val	Cys	Leu	Ile		
		660						665					670				
Ser	Glu	Glu	Arg	Asn	Glu	Cys	Val	Ile	Ala	Thr	Glu	Val					
	675					680						685					
<210>	37																
<211>	1218																
<212>	PRT																

<213> Homo sapiens

<400> 37

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Met Arg Ser Pro Arg Thr Arg Gly Arg Ser Gly Arg Pro Leu Ser Leu
1      5      10      15
Leu Leu Ala Leu Leu Cys Ala Leu Arg Ala Lys Val Cys Gly Ala Ser
      20      25      30
Gly Gln Phe Glu Leu Glu Ile Leu Ser Met Gln Asn Val Asn Gly Glu
      35      40      45
Leu Gln Asn Gly Asn Cys Cys Gly Gly Ala Arg Asn Pro Gly Asp Arg
      50      55      60
Lys Cys Thr Arg Asp Glu Cys Asp Thr Tyr Phe Lys Val Cys Leu Lys
      65      70      75      80
Glu Tyr Gln Ser Arg Val Thr Ala Gly Gly Pro Cys Ser Phe Gly Ser
      85      90      95
Gly Ser Thr Pro Val Ile Gly Gly Asn Thr Phe Asn Leu Lys Ala Ser
      100      105      110
Arg Gly Asn Asp Arg Asn Arg Ile Val Leu Pro Phe Ser Phe Ala Trp
      115      120      125
Pro Arg Ser Tyr Thr Leu Leu Val Glu Ala Trp Asp Ser Ser Asn Asp
      130      135      140
Thr Val Gln Pro Asp Ser Ile Ile Glu Lys Ala Ser His Ser Gly Met
      145      150      155      160
Ile Asn Pro Ser Arg Gln Trp Gln Thr Leu Lys Gln Asn Thr Gly Val
      165      170      175
Ala His Phe Glu Tyr Gln Ile Arg Val Thr Cys Asp Asp Tyr Tyr Tyr
      180      185      190
Gly Phe Gly Cys Asn Lys Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly
      195      200      205
His Tyr Ala Cys Asp Gln Asn Gly Asn Lys Thr Cys Met Glu Gly Trp
      210      215      220
Met Gly Pro Glu Cys Asn Arg Ala Ile Cys Arg Gln Gly Cys Ser Pro
      225      230      235      240
Lys His Gly Ser Cys Lys Leu Pro Gly Asp Cys Arg Cys Gln Tyr Gly
      245      250      255
Trp Gln Gly Leu Tyr Cys Asp Lys Cys Ile Pro His Pro Gly Cys Val
      260      265      270
His Gly Ile Cys Asn Glu Pro Trp Gln Cys Leu Cys Glu Thr Asn Trp
      275      280      285
Gly Gly Gln Leu Cys Asp Lys Asp Leu Asn Tyr Cys Gly Thr His Gln
      290      295      300
Pro Cys Leu Asn Gly Gly Thr Cys Ser Asn Thr Gly Pro Asp Lys Tyr
      305      310      315      320
Gln Cys Ser Cys Pro Glu Gly Tyr Ser Gly Pro Asn Cys Glu Ile Ala
      325      330      335
Glu His Ala Cys Leu Ser Asp Pro Cys His Asn Arg Gly Ser Cys Lys

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P11073us seq list updated.ST25.txt

340	345	350																	
Glu Thr Ser Leu Gly Phe Glu Cys Glu Cys Ser Pro Gly Trp Thr Gly																			
355	360	365																	
Pro Thr Cys Ser Thr Asn Ile Asp Asp Cys Ser Pro Asn Asn Cys Ser																			
370	375	380																	
His Gly Gly Thr Cys Gln Asp Leu Val Asn Gly Phe Lys Cys Val Cys																			
385	390	395																	400
Pro Pro Gln Trp Thr Gly Lys Thr Cys Gln Leu Asp Ala Asn Glu Cys																			
	405	410																	415
Glu Ala Lys Pro Cys Val Asn Ala Lys Ser Cys Lys Asn Leu Ile Ala																			
	420	425																	430
Ser Tyr Tyr Cys Asp Cys Leu Pro Gly Trp Met Gly Gln Asn Cys Asp																			
	435	440																	445
Ile Asn Ile Asn Asp Cys Leu Gly Gln Cys Gln Asn Asp Ala Ser Cys																			
	450	455																	460
Arg Asp Leu Val Asn Gly Tyr Arg Cys Ile Cys Pro Pro Gly Tyr Ala																			
	465	470																	480
Gly Asp His Cys Glu Arg Asp Ile Asp Glu Cys Ala Ser Asn Pro Cys																			
	485	490																	495
Leu Asn Gly Gly His Cys Gln Asn Glu Ile Asn Arg Phe Gln Cys Leu																			
	500	505																	510
Cys Pro Thr Gly Phe Ser Gly Asn Leu Cys Gln Leu Asp Ile Asp Tyr																			
	515	520																	525
Cys Glu Pro Asn Pro Cys Gln Asn Gly Ala Gln Cys Tyr Asn Arg Ala																			
	530	535																	540
Ser Asp Tyr Phe Cys Lys Cys Pro Glu Asp Tyr Glu Gly Lys Asn Cys																			
	545	550																	560
Ser His Leu Lys Asp His Cys Arg Thr Thr Pro Cys Glu Val Ile Asp																			
	565	570																	575
Ser Cys Thr Val Ala Met Ala Ser Asn Asp Thr Pro Glu Gly Val Arg																			
	580	585																	590
Tyr Ile Ser Ser Asn Val Cys Gly Pro His Gly Lys Cys Lys Ser Gln																			
	595	600																	605
Ser Gly Gly Lys Phe Thr Cys Asp Cys Asn Lys Gly Phe Thr Gly Thr																			
	610	615																	620
Tyr Cys His Glu Asn Ile Asn Asp Cys Glu Ser Asn Pro Cys Arg Asn																			
	625	630																	640
Gly Gly Thr Cys Ile Asp Gly Val Asn Ser Tyr Lys Cys Ile Cys Ser																			
	645	650																	655
Asp Gly Trp Glu Gly Ala Tyr Cys Glu Thr Asn Ile Asn Asp Cys Ser																			
	660	665																	670
Gln Asn Pro Cys His Asn Gly Gly Thr Cys Arg Asp Leu Val Asn Asp																			
	675	680																	685
Phe Tyr Cys Asp Cys Lys Asn Gly Trp Lys Gly Lys Thr Cys His Ser																			
	690	695																	700
Arg Asp Ser Gln Cys Asp Glu Ala Thr Cys Asn Asn Gly Gly Thr Cys																			
	705	710																	720

P11073us seq list updated.ST25.txt

Tyr Asp Glu Gly Asp Ala Phe Lys Cys Met Cys Pro Gly Gly Trp Glu
 725 730 735
 Gly Thr Thr Cys Asn Ile Ala Arg Asn Ser Ser Cys Leu Pro Asn Pro
 740 745 750
 Cys His Asn Gly Gly Thr Cys Val Val Asn Gly Glu Ser Phe Thr Cys
 755 760 765
 Val Cys Lys Glu Gly Trp Glu Gly Pro Ile Cys Ala Gln Asn Thr Asn
 770 775 780
 Asp Cys Ser Pro His Pro Cys Tyr Asn Ser Gly Thr Cys Val Asp Gly
 785 790 795 800
 Asp Asn Trp Tyr Arg Cys Glu Cys Ala Pro Gly Phe Ala Gly Pro Asp
 805 810 815
 Cys Arg Ile Asn Ile Asn Glu Cys Gln Ser Ser Pro Cys Ala Phe Gly
 820 825 830
 Ala Thr Cys Val Asp Glu Ile Asn Gly Tyr Arg Cys Val Cys Pro Pro
 835 840 845
 Gly His Ser Gly Ala Lys Cys Gln Glu Val Ser Gly Arg Pro Cys Ile
 850 855 860
 Thr Met Gly Ser Val Ile Pro Asp Gly Ala Lys Trp Asp Asp Asp Cys
 865 870 875 880
 Asn Thr Cys Gln Cys Leu Asn Gly Arg Ile Ala Cys Ser Lys Val Trp
 885 890 895
 Cys Gly Pro Arg Pro Cys Leu Leu His Lys Gly His Ser Glu Cys Pro
 900 905 910
 Ser Gly Gln Ser Cys Ile Pro Ile Leu Asp Asp Gln Cys Phe Val His
 915 920 925
 Pro Cys Thr Gly Val Gly Glu Cys Arg Ser Ser Ser Leu Gln Pro Val
 930 935 940
 Lys Thr Lys Cys Thr Ser Asp Ser Tyr Tyr Gln Asp Asn Cys Ala Asn
 945 950 955 960
 Ile Thr Phe Thr Phe Asn Lys Glu Met Met Ser Pro Gly Leu Thr Thr
 965 970 975
 Glu His Ile Cys Ser Glu Leu Arg Asn Leu Asn Ile Leu Lys Asn Val
 980 985 990
 Ser Ala Glu Tyr Ser Ile Tyr Ile Ala Cys Glu Pro Ser Pro Ser Ala
 995 1000 1005
 Asn Asn Glu Ile His Val Ala Ile Ser Ala Glu Asp Ile Arg Asp
 1010 1015 1020
 Asp Gly Asn Pro Ile Lys Glu Ile Thr Asp Lys Ile Ile Asp Leu
 1025 1030 1035
 Val Ser Lys Arg Asp Gly Asn Ser Ser Leu Ile Ala Ala Val Ala
 1040 1045 1050
 Glu Val Arg Val Gln Arg Arg Pro Leu Lys Asn Arg Thr Asp Phe
 1055 1060 1065
 Leu Val Pro Leu Leu Ser Ser Val Leu Thr Val Ala Trp Ile Cys
 1070 1075 1080

P11073us seq list updated.ST25.txt

Cys Leu Val Thr Ala Phe Tyr Trp Cys Leu Arg Lys Arg Arg Lys
 1085 1090 1095

Pro Gly Ser His Thr His Ser Ala Ser Glu Asp Asn Thr Thr Asn
 1100 1105 1110

Asn Val Arg Glu Gln Leu Asn Gln Ile Lys Asn Pro Ile Glu Lys
 1115 1120 1125

His Gly Ala Asn Thr Val Pro Ile Lys Asp Tyr Glu Asn Lys Asn
 1130 1135 1140

Ser Lys Met Ser Lys Ile Arg Thr His Asn Ser Glu Val Glu Glu
 1145 1150 1155

Asp Asp Met Asp Lys His Gln Gln Lys Ala Arg Phe Ala Lys Gln
 1160 1165 1170

Pro Ala Tyr Thr Leu Val Asp Arg Glu Glu Lys Pro Pro Asn Gly
 1175 1180 1185

Thr Pro Thr Lys His Pro Asn Trp Thr Asn Lys Gln Asp Asn Arg
 1190 1195 1200

Asp Leu Glu Ser Ala Gln Ser Leu Asn Arg Met Glu Tyr Ile Val
 1205 1210 1215

<210> 38

<211> 1238

<212> PRT

<213> Homo sapiens

<400> 38

Met Arg Ala Gln Gly Arg Gly Arg Leu Pro Arg Arg Leu Leu Leu Leu
 1 5 10 15

Leu Ala Leu Trp Val Gln Ala Ala Arg Pro Met Gly Tyr Phe Glu Leu
 20 25 30

Gln Leu Ser Ala Leu Arg Asn Val Asn Gly Glu Leu Leu Ser Gly Ala
 35 40 45

Cys Cys Asp Gly Asp Gly Arg Thr Thr Arg Ala Gly Gly Cys Gly His
 50 55 60

Asp Glu Cys Asp Thr Tyr Val Arg Val Cys Leu Lys Glu Tyr Gln Ala
 65 70 75 80

Lys Val Thr Pro Thr Gly Pro Cys Ser Tyr Gly His Gly Ala Thr Pro
 85 90 95

Val Leu Gly Gly Asn Ser Phe Tyr Leu Pro Pro Ala Gly Ala Ala Gly
 100 105 110

Asp Arg Ala Arg Ala Arg Ala Arg Ala Gly Gly Asp Gln Asp Pro Gly
 115 120 125

Leu Val Val Ile Pro Phe Gln Phe Ala Trp Pro Arg Ser Phe Thr Leu
 130 135 140

Ile Val Glu Ala Trp Asp Trp Asp Asn Asp Thr Thr Pro Asn Glu Glu
 145 150 155 160

Leu Leu Ile Glu Arg Val Ser His Ala Gly Met Ile Asn Pro Glu Asp

165 170 175

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P11073us seq list updated.ST25.txt

Cys 545	Arg	Asn	Gly	Ala	Arg 550	Cys	Tyr	Asn	Leu	Glu 555	Gly	Asp	Tyr	Tyr	Cys 560
Ala	Cys	Pro	Asp	Asp 565	Phe	Gly	Gly	Lys	Asn 570	Cys	Ser	Val	Pro	Arg	Glu 575
Pro	Cys	Pro	Gly 580	Gly	Ala	Cys	Arg	Val 585	Ile	Asp	Gly	Cys	Gly	Ser	Asp 590
Ala	Gly 595	Pro	Gly	Met	Pro	Gly	Thr 600	Ala	Ala	Ser	Gly	Val 605	Cys	Gly	Pro
His 610	Gly	Arg	Cys	Val	Ser	Gln 615	Pro	Gly	Gly	Asn	Phe 620	Ser	Cys	Ile	Cys
Asp 625	Ser	Gly	Phe	Thr	Gly 630	Thr	Tyr	Cys	His	Glu 635	Asn	Ile	Asp	Asp	Cys 640
Leu	Gly	Gln	Pro	Cys 645	Arg	Asn	Gly	Gly	Thr 650	Cys	Ile	Asp	Glu	Val	Asp 655
Ala	Phe	Arg	Cys 660	Phe	Cys	Pro	Ser 665	Gly	Trp	Glu	Gly	Glu	Leu	Cys	Asp 670
Thr	Asn 675	Pro	Asn	Asp	Cys	Leu	Pro 680	Asp	Pro	Cys	His	Ser 685	Arg	Gly	Arg
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Lys 705	Gly	Lys	Thr	Cys	His 710	Ser	Arg	Glu	Phe	Gln 715	Cys	Asp	Ala	Tyr	Thr 720
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Thr 785	Cys	Thr	His	Asn	Thr 790	Asn	Asp	Cys	Asn	Pro 795	Leu	Pro	Cys	Tyr	Asn 800
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His	Gly	Ser	Ser	Trp 885	Val	Glu	Asp	Cys	Asn 890	Ser	Cys	Arg	Cys	Leu	Asp 895
Gly	Arg	Arg	Asp 900	Cys	Ser	Lys	Val	Trp 905	Cys	Gly	Trp	Lys	Pro	Cys	Leu 910

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Arg Cys Leu Glu Lys Ala Pro Gly Gln Cys Leu Arg Pro Pro Cys Glu
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Phe Asn Arg Asp His Val Pro Gln Gly Thr Thr Val Gly Ala Ile Cys
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Ser Gly Ile Arg Ser Leu Pro Ala Thr Arg Ala Val Ala Arg Asp Arg
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Leu Leu Val Leu Leu Cys Asp Arg Ala Ser Ser Gly Ala Ser Ala
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<220>

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<222> (891)..(891)

<223> X is any amino acid

<400> 39

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      20      25      30
Asn  Gly  Gly  Lys  Cys  Glu  Ala  Ala  Asn  Gly  Thr  Glu  Ala  Cys  Val  Cys
      35      40      45
Gly  Gly  Ala  Phe  Val  Gly  Pro  Arg  Cys  Gln  Asp  Pro  Asn  Pro  Cys  Leu
      50      55      60
Ser  Thr  Pro  Cys  Lys  Asn  Ala  Gly  Thr  Cys  His  Val  Val  Asp  Arg  Arg
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Gly  Val  Ala  Asp  Tyr  Ala  Cys  Ser  Cys  Ala  Leu  Gly  Phe  Ser  Gly  Pro
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      100     105     110
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Ala  Ser  Asn  Pro  Cys  Ala  Asn  Gly  Gly  Gln  Cys  Leu  Pro  Phe  Glu  Ala
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Ser  Tyr  Ile  Cys  His  Cys  Pro  Pro  Ser  Phe  His  Gly  Pro  Thr  Cys  Arg
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      180     185     190
Gly  Thr  Cys  His  Asn  Glu  Val  Gly  Ser  Tyr  Arg  Cys  Val  Cys  Arg  Ala
      195     200     205
Thr  His  Thr  Gly  Pro  Asn  Cys  Glu  Arg  Pro  Tyr  Val  Pro  Cys  Ser  Pro
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Cys Val Cys Val Asn Gly Trp Thr Gly Glu Asp Cys Ser Glu Asn Ile				
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		405		410
Ser Leu Gly Ala Asn Pro Cys Glu His Ala Gly Lys Cys Ile Asn Thr				
		420		425
Leu Gly Ser Phe Glu Cys Gln Cys Leu Gln Gly Tyr Thr Gly Pro Arg				
		435		440
Cys Glu Ile Asp Val Asn Glu Cys Val Ser Asn Pro Cys Gln Asn Asp				
		450		455
Ala Thr Cys Leu Asp Gln Ile Gly Glu Phe Gln Cys Met Cys Met Pro				
465		470		475
Gly Tyr Glu Gly Val His Cys Glu Val Asn Thr Asp Glu Cys Ala Ser				
		485		490
Ser Pro Cys Leu His Asn Gly Arg Cys Leu Asp Lys Ile Asn Glu Phe				
		500		505
Gln Cys Glu Cys Pro Thr Gly Phe Thr Gly His Leu Cys Gln Tyr Asp				
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Val Asp Glu Cys Ala Ser Thr Pro Cys Lys Asn Gly Ala Lys Cys Leu				
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Asp Gly Pro Asn Thr Tyr Thr Cys Val Cys Thr Glu Gly Tyr Thr Gly				
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Tyr Leu Cys Phe Cys Leu Lys Gly Thr Thr Gly Pro Asn Cys Glu Ile				
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1775						1780					1785			
Gly	Glu	Asp	Ser	Val	Gly	Leu	Lys	Pro	Leu	Lys	Asn	Ala	Ser	Asp
1790						1795					1800			
Gly	Ala	Leu	Met	Asp	Asp	Asn	Gln	Asn	Glu	Trp	Gly	Asp	Glu	Asp
1805						1810					1815			
Leu	Glu	Thr	Lys	Lys	Phe	Arg	Phe	Glu	Glu	Pro	Val	Val	Leu	Pro
1820						1825					1830			
Asp	Leu	Asp	Asp	Gln	Thr	Asp	His	Arg	Gln	Trp	Thr	Gln	Gln	His
1835						1840					1845			
Leu	Asp	Ala	Ala	Asp	Leu	Arg	Met	Ser	Ala	Met	Ala	Pro	Thr	Pro
1850						1855					1860			
Pro	Gln	Gly	Glu	Val	Asp	Ala	Asp	Cys	Met	Asp	Val	Asn	Val	Arg
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Gly	Pro	Asp	Gly	Phe	Thr	Pro	Leu	Met	Ile	Ala	Ser	Cys	Ser	Gly
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Leu	Val	Arg	Ser	Pro	Gln	Leu	His	Gly	Ala	Pro	Leu	Gly	Gly	Thr
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2135						2140					2145			
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Ser	Lys	Gly	Leu	Ala	Cys	Gly	Ser	Lys	Glu	Ala	Lys	Asp	Leu	Lys
2165						2170					2175			
Ala	Arg	Arg	Lys	Lys	Ser	Gln	Asp	Gly	Lys	Gly	Cys	Leu	Leu	Asp
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Ser	Ser	Gly	Met	Leu	Ser	Pro	Val	Asp	Ser	Leu	Glu	Ser	Pro	His
2195						2200					2205			
Gly	Tyr	Leu	Ser	Asp	Val	Ala	Ser	Pro	Pro	Leu	Leu	Pro	Ser	Pro
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Phe	Gln	Gln	Ser	Pro	Ser	Val	Pro	Leu	Asn	His	Leu	Pro	Gly	Met
2225						2230					2235			
Pro	Asp	Thr	His	Leu	Gly	Ile	Gly	His	Leu	Asn	Val	Ala	Ala	Lys
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Pro	Glu	Met	Ala	Ala	Leu	Gly	Gly	Gly	Gly	Arg	Leu	Ala	Phe	Glu
2255						2260					2265			
Thr	Gly	Pro	Pro	Arg	Leu	Ser	His	Leu	Pro	Val	Ala	Ser	Gly	Thr
2270						2275					2280			
Ser	Thr	Val	Leu	Gly	Ser	Ser	Ser	Gly	Gly	Ala	Leu	Asn	Phe	Thr
2285						2290					2295			
Val	Gly	Gly	Ser	Thr	Ser	Leu	Asn	Gly	Gln	Cys	Glu	Trp	Leu	Ser
2300						2305					2310			
Arg	Leu	Gln	Ser	Gly	Met	Val	Pro	Asn	Gln	Tyr	Asn	Pro	Leu	Arg
2315						2320					2325			
Gly	Ser	Val	Ala	Pro	Gly	Pro	Leu	Ser	Thr	Gln	Ala	Pro	Ser	Leu
2330						2335					2340			
Gln	His	Gly	Met	Val	Gly	Pro	Leu	His	Ser	Ser	Leu	Ala	Ala	Ser
2345						2350					2355			
Ala	Leu	Ser	Gln	Met	Met	Ser	Tyr	Gln	Gly	Leu	Pro	Ser	Thr	Arg
2360						2365					2370			
Leu	Ala	Thr	Gln	Pro	His	Leu	Val	Gln	Thr	Gln	Gln	Val	Gln	Pro
2375						2380					2385			
Gln	Asn	Leu	Gln	Met	Gln	Gln	Gln	Asn	Leu	Gln	Pro	Ala	Asn	Ile
2390						2395					2400			
Gln	Gln	Gln	Gln	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Pro	Pro	Gln	Pro
2405						2410					2415			
His	Leu	Gly	Val	Ser	Ser	Ala	Ala	Ser	Gly	His	Leu	Gly	Arg	Ser

2420

2425

2430

Phe Leu Ser Gly Glu Pro Ser Gln Ala Asp Val Gln Pro Leu Gly
 2435 2440 2445

Pro Ser Ser Leu Ala Val His Thr Ile Leu Pro Gln Glu Ser Pro
 2450 2455 2460

Ala Leu Pro Thr Ser Leu Pro Ser Ser Leu Val Pro Pro Val Thr
 2465 2470 2475

Ala Ala Gln Phe Leu Thr Pro Pro Ser Gln His Ser Tyr Ser Ser
 2480 2485 2490

Pro Val Asp Asn Thr Pro Ser His Gln Leu Gln Val Pro Glu His
 2495 2500 2505

Pro Phe Leu Thr Pro Ser Pro Glu Ser Pro Asp Gln Trp Ser Ser
 2510 2515 2520

Ser Ser Pro His Ser Asn Val Ser Asp Trp Ser Glu Gly Val Ser
 2525 2530 2535

Ser Pro Pro Thr Ser Met Gln Ser Gln Ile Ala Arg Ile Pro Glu
 2540 2545 2550

Ala Phe Lys
 2555

<210> 40

<211> 2471

<212> PRT

<213> Homo sapiens

<400> 40

Met Pro Ala Leu Arg Pro Ala Leu Leu Trp Ala Leu Leu Ala Leu Trp
 1 5 10 15

Leu Cys Cys Ala Ala Pro Ala His Ala Leu Gln Cys Arg Asp Gly Tyr
 20 25 30

Glu Pro Cys Val Asn Glu Gly Met Cys Val Thr Tyr His Asn Gly Thr
 35 40 45

Gly Tyr Cys Lys Cys Pro Glu Gly Phe Leu Gly Glu Tyr Cys Gln His
 50 55 60

Arg Asp Pro Cys Glu Lys Asn Arg Cys Gln Asn Gly Gly Thr Cys Val
 65 70 75 80

Ala Gln Ala Met Leu Gly Lys Ala Thr Cys Arg Cys Ala Ser Gly Phe
 85 90 95

Thr Gly Glu Asp Cys Gln Tyr Ser Thr Ser His Pro Cys Phe Val Ser
 100 105 110

Arg Pro Cys Leu Asn Gly Gly Thr Cys His Met Leu Ser Arg Asp Thr
 115 120 125

Tyr Glu Cys Thr Cys Gln Val Gly Phe Thr Gly Lys Glu Cys Gln Trp
 130 135 140

Thr Asp Ala Cys Leu Ser His Pro Cys Ala Asn Gly Ser Thr Cys Thr
 145 150 155 160

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Thr Val Ala Asn Gln Phe Ser Cys Lys Cys Leu Thr Gly Phe Thr Gly
          165                      170                      175

Gln Lys Cys Glu Thr Asp Val Asn Glu Cys Asp Ile Pro Gly His Cys
          180                      185                      190

Gln His Gly Gly Thr Cys Leu Asn Leu Pro Gly Ser Tyr Gln Cys Gln
          195                      200                      205

Cys Pro Gln Gly Phe Thr Gly Gln Tyr Cys Asp Ser Leu Tyr Val Pro
          210                      215                      220

Cys Ala Pro Ser Pro Cys Val Asn Gly Gly Thr Cys Arg Gln Thr Gly
          225                      230                      235                      240

Asp Phe Thr Phe Glu Cys Asn Cys Leu Pro Gly Phe Glu Gly Ser Thr
          245                      250                      255

Cys Glu Arg Asn Ile Asp Asp Cys Pro Asn His Arg Cys Gln Asn Gly
          260                      265                      270

Gly Val Cys Val Asp Gly Val Asn Thr Tyr Asn Cys Arg Cys Pro Pro
          275                      280                      285

Gln Trp Thr Gly Gln Phe Cys Thr Glu Asp Val Asp Glu Cys Leu Leu
          290                      295                      300

Gln Pro Asn Ala Cys Gln Asn Gly Gly Thr Cys Ala Asn Arg Asn Gly
          305                      310                      315                      320

Gly Tyr Gly Cys Val Cys Val Asn Gly Trp Ser Gly Asp Asp Cys Ser
          325                      330                      335

Glu Asn Ile Asp Asp Cys Ala Phe Ala Ser Cys Thr Pro Gly Ser Thr
          340                      345                      350

Cys Ile Asp Arg Val Ala Ser Phe Ser Cys Met Cys Pro Glu Gly Lys
          355                      360                      365

Ala Gly Leu Leu Cys His Leu Asp Asp Ala Cys Ile Ser Asn Pro Cys
          370                      375                      380

His Lys Gly Ala Leu Cys Asp Thr Asn Pro Leu Asn Gly Gln Tyr Ile
          385                      390                      395                      400

Cys Thr Cys Pro Gln Gly Tyr Lys Gly Ala Asp Cys Thr Glu Asp Val
          405                      410                      415

Asp Glu Cys Ala Met Ala Asn Ser Asn Pro Cys Glu His Ala Gly Lys
          420                      425                      430

Cys Val Asn Thr Asp Gly Ala Phe His Cys Glu Cys Leu Lys Gly Tyr
          435                      440                      445

Ala Gly Pro Arg Cys Glu Met Asp Ile Asn Glu Cys His Ser Asp Pro
          450                      455                      460

Cys Gln Asn Asp Ala Thr Cys Leu Asp Lys Ile Gly Gly Phe Thr Cys
          465                      470                      475                      480

Leu Cys Met Pro Gly Phe Lys Gly Val His Cys Glu Leu Glu Ile Asn
          485                      490                      495

Glu Cys Gln Ser Asn Pro Cys Val Asn Asn Gly Gln Cys Val Asp Lys
          500                      505                      510

Val Asn Arg Phe Gln Cys Leu Cys Pro Pro Gly Phe Thr Gly Pro Val
          515                      520                      525

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Cys Gln Ile Asp Ile Asp Asp Cys Ser Ser Thr Pro Cys Leu Asn Gly
 530 535 540
 Ala Lys Cys Ile Asp His Pro Asn Gly Tyr Glu Cys Gln Cys Ala Thr
 545 550 555 560
 Gly Phe Thr Gly Val Leu Cys Glu Glu Asn Ile Asp Asn Cys Asp Pro
 565 570 575
 Asp Pro Cys His His Gly Gln Cys Gln Asp Gly Ile Asp Ser Tyr Thr
 580 585 590
 Cys Ile Cys Asn Pro Gly Tyr Met Gly Ala Ile Cys Ser Asp Gln Ile
 595 600 605
 Asp Glu Cys Tyr Ser Ser Pro Cys Leu Asn Asp Gly Arg Cys Ile Asp
 610 615 620
 Leu Val Asn Gly Tyr Gln Cys Asn Cys Gln Pro Gly Thr Ser Gly Val
 625 630 635 640
 Asn Cys Glu Ile Asn Phe Asp Asp Cys Ala Ser Asn Pro Cys Ile His
 645 650 655
 Gly Ile Cys Met Asp Gly Ile Asn Arg Tyr Ser Cys Val Cys Ser Pro
 660 665 670
 Gly Phe Thr Gly Gln Arg Cys Asn Ile Asp Ile Asp Glu Cys Ala Ser
 675 680 685
 Asn Pro Cys Arg Lys Gly Ala Thr Cys Ile Asn Gly Val Asn Gly Phe
 690 695 700
 Arg Cys Ile Cys Pro Glu Gly Pro His His Pro Ser Cys Tyr Ser Gln
 705 710 715 720
 Val Asn Glu Cys Leu Ser Asn Pro Cys Ile His Gly Asn Cys Thr Gly
 725 730 735
 Gly Leu Ser Gly Tyr Lys Cys Leu Cys Asp Ala Gly Trp Val Gly Ile
 740 745 750
 Asn Cys Glu Val Asp Lys Asn Glu Cys Leu Ser Asn Pro Cys Gln Asn
 755 760 765
 Gly Gly Thr Cys Asp Asn Leu Val Asn Gly Tyr Arg Cys Thr Cys Lys
 770 775 780
 Lys Gly Phe Lys Gly Tyr Asn Cys Gln Val Asn Ile Asp Glu Cys Ala
 785 790 795 800
 Ser Asn Pro Cys Leu Asn Gln Gly Thr Cys Phe Asp Asp Ile Ser Gly
 805 810 815
 Tyr Thr Cys His Cys Val Leu Pro Tyr Thr Gly Lys Asn Cys Gln Thr
 820 825 830
 Val Leu Ala Pro Cys Ser Pro Asn Pro Cys Glu Asn Ala Ala Val Cys
 835 840 845
 Lys Glu Ser Pro Asn Phe Glu Ser Tyr Thr Cys Leu Cys Ala Pro Gly
 850 855 860
 Trp Gln Gly Gln Arg Cys Thr Ile Asp Ile Asp Glu Cys Ile Ser Lys
 865 870 875 880
 Pro Cys Met Asn His Gly Leu Cys His Asn Thr Gln Gly Ser Tyr Met
 885 890 895
 Cys Glu Cys Pro Pro Gly Phe Ser Gly Met Asp Cys Glu Glu Asp Ile

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Asp Ile 1265	Asn Glu Cys Leu Ser 1270	Asn Pro Cys Ser Ser 1275	Glu Gly Ser
Leu Asp 1280	Cys Ile Gln Leu Thr 1285	Asn Asp Tyr Leu Cys 1290	Val Cys Arg
Ser Ala 1295	Phe Thr Gly Arg His 1300	Cys Glu Thr Phe Val 1305	Asp Val Cys
Pro Gln 1310	Met Pro Cys Leu Asn 1315	Gly Gly Thr Cys Ala 1320	Val Ala Ser
Asn Met 1325	Pro Asp Gly Phe Ile 1330	Cys Arg Cys Pro Pro 1335	Gly Phe Ser
Gly Ala 1340	Arg Cys Gln Ser Ser 1345	Cys Gly Gln Val Lys 1350	Cys Arg Lys
Gly Glu 1355	Gln Cys Val His Thr 1360	Ala Ser Gly Pro Arg 1365	Cys Phe Cys
Pro Ser 1370	Pro Arg Asp Cys Glu 1375	Ser Gly Cys Ala Ser 1380	Ser Pro Cys
Gln His 1385	Gly Gly Ser Cys His 1390	Pro Gln Arg Gln Pro 1395	Pro Tyr Tyr
Ser Cys 1400	Gln Cys Ala Pro Pro 1405	Phe Ser Gly Ser Arg 1410	Cys Glu Leu
Tyr Thr 1415	Ala Pro Pro Ser Thr 1420	Pro Pro Ala Thr Cys 1425	Leu Ser Gln
Tyr Cys 1430	Ala Asp Lys Ala Arg 1435	Asp Gly Val Cys Asp 1440	Glu Ala Cys
Asn Ser 1445	His Ala Cys Gln Trp 1450	Asp Gly Gly Asp Cys 1455	Ser Leu Thr
Met Glu 1460	Asn Pro Trp Ala Asn 1465	Cys Ser Ser Pro Leu 1470	Pro Cys Trp
Asp Tyr 1475	Ile Asn Asn Gln Cys 1480	Asp Glu Leu Cys Asn 1485	Thr Val Glu
Cys Leu 1490	Phe Asp Asn Phe Glu 1495	Cys Gln Gly Asn Ser 1500	Lys Thr Cys
Lys Tyr 1505	Asp Lys Tyr Cys Ala 1510	Asp His Phe Lys Asp 1515	Asn His Cys
Asn Gln 1520	Gly Cys Asn Ser Glu 1525	Glu Cys Gly Trp Asp 1530	Gly Leu Asp
Cys Ala 1535	Ala Asp Gln Pro Glu 1540	Asn Leu Ala Glu Gly 1545	Thr Leu Val
Ile Val 1550	Val Leu Met Pro Pro 1555	Glu Gln Leu Leu Gln 1560	Asp Ala Arg
Ser Phe 1565	Leu Arg Ala Leu Gly 1570	Thr Leu Leu His Thr 1575	Asn Leu Arg
Ile Lys 1580	Arg Asp Ser Gln Gly 1585	Glu Leu Met Val Tyr 1590	Pro Tyr Tyr
Gly Glu 1595	Lys Ser Ala Ala Met 1600	Lys Lys Gln Arg Met 1605	Thr Arg Arg

Ser	Leu	Pro	Gly	Glu	Gln	Glu	Gln	Glu	Val	Ala	Gly	Ser	Lys	Val
1610						1615					1620			
Phe	Leu	Glu	Ile	Asp	Asn	Arg	Gln	Cys	Val	Gln	Asp	Ser	Asp	His
1625						1630					1635			
Cys	Phe	Lys	Asn	Thr	Asp	Ala	Ala	Ala	Ala	Leu	Leu	Ala	Ser	His
1640						1645					1650			
Ala	Ile	Gln	Gly	Thr	Leu	Ser	Tyr	Pro	Leu	Val	Ser	Val	Val	Ser
1655						1660					1665			
Glu	Ser	Leu	Thr	Pro	Glu	Arg	Thr	Gln	Leu	Leu	Tyr	Leu	Leu	Ala
1670						1675					1680			
Val	Ala	Val	Val	Ile	Ile	Leu	Phe	Ile	Ile	Leu	Leu	Gly	Val	Ile
1685						1690					1695			
Met	Ala	Lys	Arg	Lys	Arg	Lys	His	Gly	Ser	Leu	Trp	Leu	Pro	Glu
1700						1705					1710			
Gly	Phe	Thr	Leu	Arg	Arg	Asp	Ala	Ser	Asn	His	Lys	Arg	Arg	Glu
1715						1720					1725			
Pro	Val	Gly	Gln	Asp	Ala	Val	Gly	Leu	Lys	Asn	Leu	Ser	Val	Gln
1730						1735					1740			
Val	Ser	Glu	Ala	Asn	Leu	Ile	Gly	Thr	Gly	Thr	Ser	Glu	His	Trp
1745						1750					1755			
Val	Asp	Asp	Glu	Gly	Pro	Gln	Pro	Lys	Lys	Val	Lys	Ala	Glu	Asp
1760						1765					1770			
Glu	Ala	Leu	Leu	Ser	Glu	Glu	Asp	Asp	Pro	Ile	Asp	Arg	Arg	Pro
1775						1780					1785			
Trp	Thr	Gln	Gln	His	Leu	Glu	Ala	Ala	Asp	Ile	Arg	Arg	Thr	Pro
1790						1795					1800			
Ser	Leu	Ala	Leu	Thr	Pro	Pro	Gln	Ala	Glu	Gln	Glu	Val	Asp	Val
1805						1810					1815			
Leu	Asp	Val	Asn	Val	Arg	Gly	Pro	Asp	Gly	Cys	Thr	Pro	Leu	Met
1820						1825					1830			
Leu	Ala	Ser	Leu	Arg	Gly	Gly	Ser	Ser	Asp	Leu	Ser	Asp	Glu	Asp
1835						1840					1845			
Glu	Asp	Ala	Glu	Asp	Ser	Ser	Ala	Asn	Ile	Ile	Thr	Asp	Leu	Val
1850						1855					1860			
Tyr	Gln	Gly	Ala	Ser	Leu	Gln	Ala	Gln	Thr	Asp	Arg	Thr	Gly	Glu
1865						1870					1875			
Met	Ala	Leu	His	Leu	Ala	Ala	Arg	Tyr	Ser	Arg	Ala	Asp	Ala	Ala
1880						1885					1890			
Lys	Arg	Leu	Leu	Asp	Ala	Gly	Ala	Asp	Ala	Asn	Ala	Gln	Asp	Asn
1895						1900					1905			
Met	Gly	Arg	Cys	Pro	Leu	His	Ala	Ala	Val	Ala	Ala	Asp	Ala	Gln
1910						1915					1920			
Gly	Val	Phe	Gln	Ile	Leu	Ile	Arg	Asn	Arg	Val	Thr	Asp	Leu	Asp
1925						1930					1935			
Ala	Arg	Met	Asn	Asp	Gly	Thr	Thr	Pro	Leu	Ile	Leu	Ala	Ala	Arg
1940						1945					1950			
Leu	Ala	Val	Glu	Gly	Met	Val	Ala	Glu	Leu	Ile	Asn	Cys	Gln	Ala

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1960 1965

1955	Asp Val	Asn Ala	Val Asp	Asp Asp	His Gly	Lys Ser	Ala Leu	His Trp	
	1970			1975			1980		
	Ala Ala	Ala Val	Asn Asn	Val Val	Glu Ala	Thr Leu	Leu Leu	Leu Lys	
	1985			1990			1995		
	Asn Gly	Ala Asn	Arg Asp	Met Met	Gln Asp	Asn Lys	Glu Glu	Thr Pro	
	2000			2005			2010		
	Leu Phe	Leu Ala	Ala Arg	Glu Glu	Gly Ser	Tyr Glu	Ala Ala	Lys Ile	
	2015			2020			2025		
	Leu Leu	Asp His	Phe Ala	Asn Asn	Arg Asp	Ile Thr	Asp His	Met Asp	
	2030			2035			2040		
	Arg Leu	Pro Arg	Asp Val	Ala Ala	Arg Asp	Arg Met	His His	Asp Ile	
	2045			2050			2055		
	Val Arg	Leu Leu	Asp Glu	Tyr Tyr	Asn Val	Thr Pro	Ser Ser	Pro Gly	
	2060			2065			2070		
	Thr Val	Leu Thr	Ser Ala	Leu Leu	Ser Pro	Val Ile	Cys Gly	Pro Asn	
	2075			2080			2085		
	Arg Ser	Phe Leu	Ser Leu	Lys Lys	His Thr	Pro Met	Gly Lys	Lys Ser	
	2090			2095			2100		
	Arg Arg	Pro Ser	Ala Lys	Ser Ser	Thr Met	Pro Thr	Ser Leu	Pro Asn	
	2105			2110			2115		
	Leu Ala	Lys Glu	Ala Lys	Asp Asp	Ala Lys	Gly Ser	Arg Arg	Lys Lys	
	2120			2125			2130		
	Ser Leu	Ser Glu	Lys Val	Gln Gln	Leu Ser	Glu Ser	Ser Val	Thr Leu	
	2135			2140			2145		
	Ser Pro	Val Asp	Ser Leu	Glu Glu	Ser Pro	His Thr	Tyr Val	Ser Asp	
	2150			2155			2160		
	Thr Thr	Ser Ser	Pro Met	Ile Ile	Thr Ser	Pro Gly	Ile Leu	Gln Ala	
	2165			2170			2175		
	Ser Pro	Asn Pro	Met Leu	Ala Ala	Thr Ala	Ala Pro	Pro Ala	Pro Val	
	2180			2185			2190		
	His Ala	Gln His	Ala Leu	Ser Ser	Phe Ser	Asn Leu	His Glu	Met Gln	
	2195			2200			2205		
	Pro Leu	Ala His	Gly Ala	Ser Ser	Thr Val	Leu Pro	Ser Val	Ser Gln	
	2210			2215			2220		
	Leu Leu	Ser His	His His	Ile Ile	Val Ser	Pro Gly	Ser Gly	Ser Ala	
	2225			2230			2235		
	Gly Ser	Leu Ser	Arg Leu	His His	Pro Val	Pro Val	Pro Ala	Asp Trp	
	2240			2245			2250		
	Met Asn	Arg Met	Glu Val	Asn Asn	Glu Thr	Gln Tyr	Asn Glu	Met Phe	
	2255			2260			2265		
	Gly Met	Val Leu	Ala Pro	Ala Ala	Glu Gly	Thr His	Pro Gly	Ile Ala	
	2270			2275			2280		
	Pro Gln	Ser Arg	Pro Pro	Glu Glu	Gly Lys	His Ile	Thr Thr	Pro Arg	
	2285			2290			2295		
	Glu Pro	Leu Pro	Pro Ile	Val Val	Thr Phe	Gln Leu	Ile Pro	Lys Gly	
	2300			2305			2310		

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Ser Ile	Ala Gln	Pro Ala	Gly	Ala Pro	Gln Pro	Gln	Ser Thr	Cys	
2315			2320			2325			
Pro Pro	Ala Val	Ala Gly	Pro	Leu Pro	Thr Met	Tyr	Gln Ile	Pro	
2330			2335			2340			
Glu Met	Ala Arg	Leu Pro	Ser	Val Ala	Phe Pro	Thr	Ala Met	Met	
2345			2350			2355			
Pro Gln	Gln Asp	Gly Gln	Val	Ala Gln	Thr Ile	Leu	Pro Ala	Tyr	
2360			2365			2370			
His Pro	Phe Pro	Ala Ser	Val	Gly Lys	Tyr Pro	Thr	Pro Pro	Ser	
2375			2380			2385			
Gln His	Ser Tyr	Ala Ser	Ser	Asn Ala	Ala Glu	Arg	Thr Pro	Ser	
2390			2395			2400			
His Ser	Gly His	Leu Gln	Gly	Glu His	Pro Tyr	Leu	Thr Pro	Ser	
2405			2410			2415			
Pro Glu	Ser Pro	Asp Gln	Trp	Ser Ser	Ser Ser	Pro	His Ser	Ala	
2420			2425			2430			
Ser Asp	Trp Ser	Asp Val	Thr	Thr Ser	Pro Thr	Pro	Gly Gly	Ala	
2435			2440			2445			
Gly Gly	Gly Gln	Arg Gly	Pro	Gly Thr	His Met	Ser	Glu Pro	Pro	
2450			2455			2460			
His Asn	Asn Met	Gln Val	Tyr	Ala					
2465			2470						